

CLAIMS

WHAT IS CLAIMED IS:

1. A wireless communications system, comprising:
a display adapted to display symbolic information by emitting linearly polarized light;
a symbolic data acquisition device adapted to identify said symbolic information using electromagnetic waves; and
a mitigation device oriented between said display and said data acquisition device.
2. The communications system of Claim 1, wherein said mitigation device changes the polarization angle of light emitted from said symbolic data acquisition device such that the emitted light is not planar.
3. The communications system of Claim 1, wherein said mitigation device is a wave retarder.
4. The communications system of Claim 1, wherein said mitigation device is a quarter wave retarder.
5. The communications system of Claim 4, wherein said display is a Liquid Crystal Display (LCD).
6. The communications system of Claim 5, wherein said LCD is incorporated into a cellular telephone.
7. The communications system of Claim 6, wherein said telephone includes a barcode scanner.

8. The communications system of Claim 5, wherein said LCD is incorporated into a personal digital assistant.

9. The communications system of Claim 5, wherein said LCD is incorporated into a pager.

10. The communications system of Claim 5, wherein said LCD is incorporated into a computer.

11. The communications system of Claim 4, wherein said data acquisition device is a laser scanner.

12. The communications system of Claim 11, wherein the polarization angle of the light emitted from said laser scanner changes over time.

13. The communications system of Claim 4, wherein said quarter wave retarder is removable from said display.

14. The communications system of Claim 13, wherein said retarder is attached to said display by a plastic static sheet.

15. The communications system of Claim 13, wherein said retarder is attached to said display by a removable plastic or glass face on the display.

16. The communications system of Claim 4, wherein said retarder is manufactured as part of said display.

17. The communications system of Claim 4, wherein said retarder is manufactured as part of a protective casing of a device that incorporates said display.

18. The communications system of Claim 17, wherein said device is a flip-style cellular telephone.

19. The communications system of Claim 13, wherein said removable retarder is marked with a plurality of orientation symbols to facilitate the application of the retarder to multiple displays with different light polarization planes.

20. The communications system of Claim 13, wherein said removable retarder is color-coded to correspond to displays with a specific polarization plane.

21. The communications system of Claim 4, wherein said symbolic information is a barcode.

22. The communications system of Claim 6, wherein said symbolic information is a barcode.

23. The communications system of Claim 4, wherein said display is incorporated into a device that is connected to the Internet.

24. The communications system of Claim 22, wherein said telephone is connected to the Internet.

25. A wireless communications method, comprising the steps of:
displaying symbolic information on a display which outputs linearly polarized light;
providing a mitigation device between the display and a data acquisition device;
and

acquiring the symbolic information from said display utilizing electromagnetic waves emitted from said data acquisition device.

26. The communications method of Claim 25, wherein said mitigation device is a quarter wave retarder.

27. The communications method of Claim 26, wherein said data acquisition device is a laser scanner.

28. The communications method of Claim 26, wherein said symbolic information is a barcode.

29. The communications method of Claim 26, further comprising the steps of: inputting said symbolic information; and storing said symbolic information before said step of displaying said symbolic information.

30. The communications method of Claim 29, wherein said inputting step comprises scanning a barcode.

31. The communications method of Claim 30, wherein said barcode is a manufacturer's coupon.

32. The communications method of Claim 30, wherein said scanning step utilizes a cellular telephone barcode scanner.

33. The communications method of Claim 29, wherein said inputting step comprises selecting a coupon barcode from a web site.

34. The communications method of Claim 29, wherein said inputting step comprises selecting a coupon designation from a received email message.

35. The communications method of Claim 29, wherein said inputting step comprises selecting a coupon designation from a received pager message.

36. The communications method of Claim 29, wherein said inputting step comprises the steps of:

scanning a barcode on a product; and
receiving coupon information via the Internet related to said scanned product.

37. The communications method of Claim 36, wherein said received coupon information is an adjustment in the price of said scanned good based on intelligent factors selected from the group consisting of inventory level, time of season, manufacture promotion, store promotion, and customer product interest.

38. The communications method of Claim 25, wherein said mitigation device is a retarder.

39. The communications method of Claim 25, wherein said display is an liquid crystal display.

40. A system for transmitting information, comprising:
a data entry device for inputting information;
a data center for storing said information;
a point-of-use computer for utilizing said information; and
a display device in communication with said data center adapted to communicate said information to said point-of-use computer via a wireless data link.

41. The system of Claim 40, wherein said data entry device is a cellular telephone.

42. The system of Claim 41, wherein said cellular telephone includes a barcode scanner.

43. The system of Claim 41, wherein said cellular telephone includes a memory for local storage of said information.

44. The system of Claim 41, wherein said cellular telephone is adapted to allow entry of information via a numeric keypad.

45. The system of Claim 40, wherein said data entry device is a personal digital assistant (PDA).

46. The system of Claim 40, wherein said data entry device is a personal computer.

47. The system of Claim 46, wherein said personal computer includes a scanner.

48. The system of Claim 40, wherein said information is a barcode representing a manufacturer coupon.

49. The system of Claim 40, wherein said information is a barcode representing an event ticket.

50. The system of Claim 40, wherein said information is a barcode identifying a consumer credit card, bank card, membership card, or identification card.

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51. The system of Claim 40, wherein said display device further comprises a quarter wave retarder and said point-of-use computer comprises a laser scanner, further wherein said scanner is adapted to acquire said information displayed on said display device as a barcode.

52. The system of Claim 51, wherein said display device emits linearly polarized light.

53. The system of Claim 52, wherein said display device is an LCD.

54. The system of Claim 53, wherein said display device is a cellular telephone.

55. The system of Claim 51, wherein said data center is adapted to clear credit card transactions.

56. The system of Claim 51, wherein said data center is adapted to clear automated clearing house (ACH) transactions.

57. The system of Claim 40, wherein said point-of-use computer is communicatively connected to said data center.

58. The system of Claim 40, wherein said data center stores said information in a web-publishable format.

59. The system of Claim 58, wherein said display device comprises a web application that allows the browsing of said web-publishable information on said display device.

60. A method for transferring information, comprising the steps of:

entering information into a system for storage;
storing said information;
displaying a scannable symbol related to said information on a display that
outputs linearly polarized light; and
scanning said symbol to acquire data related to said symbol.

61. The method of Claim 60, wherein said symbol is a barcode.

62. The method of Claim 61, wherein said scanning step takes place on a point-
of-use computer including a barcode scanner.

63. The method of Claim 62, wherein said display is an LCD with a quarter
wave retarder attached thereto.

64. The method of Claim 63, wherein said stored information is communicated
to said display via the wireless Internet.

65. The method of Claim 60, wherein said entering information step is the
scanning of a product barcode.

66. The method of Claim 60, wherein said entering information step is the
scanning of a coupon barcode.

67. The method of Claim 62, further comprising the step of:
verifying the identification of a user of the system before the step of displaying a
scannable symbol.

68. The method of Claim 67, wherein said verification step is comprised of accepting a personal identification number entered into a device that incorporates the display.

69. The method of Claim 67, wherein said verification step comprises the steps of:

sending an identification barcode from a data center to the display;
displaying said identification barcode to a remote computer with a barcode scanner; and
receiving the identification barcode back at the data center via a communications link between the remote computer and the data center.

70. An electronic couponing method, comprising the steps of:
storing coupon identification information in an electronic database at a data center;
selecting at least one item for purchase at a retail store;
determining if an electronic coupon for at least one of said at least one item exists in the database; and
redeeming said coupon at the retail store.

71. The method of Claim 70, wherein said determining step occurs at the data center.

72. The method of Claim 70, wherein said determining step occurs on a store computer infrastructure associated with said retail store.

73. The method of Claim 70, further including the step of expiring each electronic coupon that matched said at least one item.

74. The method of Claim 70, further including the step of:
clearing said redeemed coupon with the coupon provider.

75. The method of Claim 74, wherein said clearing step occurs between the data center and a coupon provider.

76. The method of Claim 74, wherein said clearing step occurs between the retail store and a coupon provider.

77. The method of Claim 70, wherein said coupon identification information is stored in a web-publishable format.

78. The method of Claim 70, wherein said selection occurs on a web-enabled telephone.

79. The method of Claim 78, wherein said telephone includes an LCD with a quarter wave retarder.

80. A payment method, comprising the steps of:
storing payment information about a consumer in a data center;
sending identification information about said consumer to a point-of-sale computer; and
receiving identification verification about said consumer from the point-of-sale computer; and
completing a payment transaction with the aid of the data center.

81. The method of Claim 80, wherein said identification information is a barcode with information pertaining to an automated clearing house transaction.

82. The method of Claim 80, wherein said identification information is a barcode with information pertaining to a credit card transaction.

83. The method of Claim 80, wherein said stored payment information includes consumer account information and an authorization to debit said account.

84. The method of Claim 80, wherein said step of sending identification information about said consumer to a point-of-sale computer further comprises:
serving a barcode including said identification information to a wireless consumer device with a display;
displaying said barcode; and
scanning said barcode with a laser scanner connected to the point-of-sale computer.

85. The method of Claim 84, wherein said display emits linearly polarized light.

86. The method of Claim 85, wherein said display is an LCD including a wave retarder.

87. The method of Claim 86, wherein said consumer device is connected to said data center by a wireless Internet connection.

88. The method of Claim 87, wherein said step of completing a payment transaction comprises generating a full automated clearing house (ACH) transaction to be served to a bank.

89. The method of Claim 88, wherein said ACH transaction is served to the bank from the data center.

90. The method of Claim 87, wherein said step of completing a payment transaction comprises generating a full credit card transaction to be served to a credit card clearing house.